

INDEX OF SURGICAL PROGRESS.

GENERAL SURGERY.

I. Remarks on the Preparation of Antiseptic Bichloride Solutions. By Prof. O. ANGERER (Munich). Solutions of bichloride in ordinary water suffer a partial decomposition after a time, some of the mercury precipitating in the form of superchloride. This is somewhat influenced by light, warmth and air. Fürbringer last year found that 80% of the bichloride was thus separated in water of Jena. At Munich it amounts to 50%. This depends on the hardness of the water. Fürbringer found that various acids by breaking up the carbonates prevented this precipitation. The apothecary, Schillinger, of Munich, found that by adding an equal weight of common salt to any quantity of sublimate such precipitation after solution could also be avoided. Finally, Emmerich, of Munich, has experimented with this combination in very weak solutions (1:50,000) and compared the degree of asepsis achieved, with that from equally dilute solutions of simple bichloride. He finds the disinfecting power of the salt bichloride mixture quite equal to that of the bichloride alone.

The mixture can be made into tablets, and is thus more readily soluble than sublimate alone—from the ready solubility of the salt.—*Centbl. f. Chirg.*, 1887, No. 7.

II. On Wound-Healing Under the Moist Blood-Clot. By Dr. M. SCHEDE (Hamburg). Early in the practice of antiseptic wound-treatment it was variously noted, *e. g.*, by Wesser, Volkmann, Watson Cheyne, etc., that blood left in aseptic wounds did not disintegrate nor putrefy, but underwent organization in part or whole. Volkmann utilized the principle to secure a covering for exposed bone. Somewhat analogous was Hamilton's method of sponge-grafting. Still, this knowledge was not used further, and blood was still considered the

worst enemy to wounds, and specially liable to induce inflammatory complications. Careful stoppage of bleeding, ample drainage and compress-dressings were the fruits of this view, and that these have accomplished much is certain. Still, it does not follow that further progress is impossible.

While agreeing with Neuber and Esmarch that it is desirable to free wounds from all foreign bodies, even drains, he pursues a different method. Neuber seeks to avoid all accumulation of blood and secretions by holding apposed wound surfaces in contact even where depression is necessary. S. avails himself of the organizing power of the moist blood-clot. He thus fills defects with a plastic material, rendering both drainage and compression unnecessary.

Experience with Phelps's methods of open division of shortened parts in club-foot first lead him to study this subject. Here the large clot which at first filled the wound is found, at the end of three to four weeks under an antiseptic dressing, to have left but a scar and some dry odorless blood on the dressing—no secretion having occurred. Consequently, Schede concluded to try the same plan in a variety of other wounds, notably those where a bony defect was to be filled. He sums up 241 such operations, including, *e. g.*, 40 joint resections, 18 excavations of tubercular foci in bone with free opening into relatively healthy joints, 30 total removals of small cheesy bones, 29 necrotomies, 20 Phelps's operations, 24 extirpations of tumors, sacks, etc. He follows in general a uniform procedure; constriction, careful antisepsis (bichloride 1:1,000), complete removal of all diseased tissue. Usually, the wound was sewed up, except one or more openings, 1 to 2 cm. long—at the highest, not as otherwise at the lowest point of the wound—that any excess of blood may pass into the dressing. Where the conditions seem to demand a surer discharge a Neuber's buttonhole was added. The skin was brought together without regard to the apposition of the deeper wound-walls. In some cases, as in Phelps's operation, the wound was left open. No drainage, but an imperforate protective silk covering, which should extend several cm. beyond the wound edges. This must fit the skin nicely, and serves the double purpose of insuring the filling of the wound, and

then preventing any sucking up into the dressing or drying up of the wound-clots. No other impermeate layer; gauzes, cotton, moss sacks, and as perfect rest to the part as possible. With these precautions the course of the wound is quite typical and uniform. The blood fills up all angles and pockets of the wound, coagulates, and without any further accretion is gradually replaced from the parietes of the wound by permanent tissue. Small cavities in bone heal without a fistula in twelve to fourteen days, larger ones in three to six weeks.

Following the principle of keeping the wound free from foreign matters, he does not suture bones—unless at times with catgut. He uses instead hard rubber splints (from a Hamburg-New York Rubber Company) in the dressings, which by dipping in boiling water can be fitted as desired. The constriction should be released for a time before bandaging, and any special bleeding vessels ligated; frequently there is no need of ligatures. The filling of the wound with blood is entirely left to parenchymatous bleeding. He does not change the dressing until he expects to find the wound healed—not even if in the first few days the thick dressing becomes soaked through, unless it increases and keeps moist. No reaction follows besides occasionally an aseptic fever for two or three days.

His results were notably good. He has not applied the method as yet to operations on the hip-joint, nor on the soft parts of the body, except in tenotomies and deep lacerations with retraction.

Complete antisepsis is naturally a necessity. Where this seems questionable he advises filling the cavity with antiseptic material as gauze or bismuth and waiting for granulations. These may then be partially scraped and the wound after filling with blood be put up as otherwise at the start.

Imperfect results may follow: (1). From incomplete filling of the wound with blood. This can be avoided by suitable care at the beginning. (2). From fungous breaking down of the cicatrix, probably, only where all the tubercular material was not removed. In severe general tuberculosis the coagula do not organize. (3). From any septic infection. Foreign substances, as sequestra remaining in the wound, naturally lead to the formation of fistula.

The use of antiseptic powders would not be permissible in this method, and carbolic acid would, perhaps, not be as satisfactory as bichloride.

A series of typical cases are given in brief to illustrate his method.—*Arch. f. klin. Chir.*, 1886, Bd. 34, Hft. ii.

WM. BROWNING (Brooklyn).

GENITO-URINARY ORGANS.

I. Indications and Contraindications to Rapid Lithotripsy. By J. C. FELIX GUYON (Paris). This paper is in opposition to the paper of Koenig and the general tendency of the last Congress of German Surgeons (*vid. ANNALS OF SURGERY*, vol. iv. page 535) and advocates lithotripsy in preference to lithotomy in almost all cases. Its great fault according to German surgeons, is that it requires consummate skill on the part of the operator, and can not be performed by every one. But all varieties of lithotomy demand a skilful operator; lithotomy must necessarily be preceded by a minute vesical exploration, made by instruments of slight curve, which only a practiced hand is capable of managing. In reality, lithotripsy is only difficult in certain cases. In all others it is the duty of the surgeon to give the patient the benefit of this operation, so simple and so benign. Since the middle of 1878, M. Guyon has operated for stone six hundred and seventy-eight times, using lithotomy only thirty-one times. In twelve cases of prerectal section, he obtained seven cures and five deaths, a mortality of 41.6%. Nineteen hypogastric sections gave ten recoveries and nine deaths, a mortality of 48.2%. Perineal section then gave the best percentage, but three of these cures were in young subjects, which is the reason for its apparent superiority. Tuffier has shown that the mortality of all the cases of hypogastric section he was able to collect was but 27%; if only the cases where the calculi were small, not weighing more than 30 grammes, be taken, the mortality is only 15.35%.

Now Desnos has collected the cases of rapid lithotripsy and the mortality was but 6.11%. In the author's cases, there were but thirty-four deaths, a mortality of but 5.2%. These figures are in marked contrast with those furnished by lithotomy, even for small calculi. In the last